

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please cancel Claims 1-11 and 19-28, without prejudice, subject to applicants' right to file a  
4 divisional patent application directed to these claims during the pendency of the present application.

5 Please amend Claims 15, 16, 32, and 33 as follows:

6 Claims 1-11 (Cancelled)

7 12. (Original) A method for automatically selecting a quality level when compressing each of a  
8 set of image files to produce compressed image files, so that a total size of the compressed image file does  
9 not exceed a predefined limit, comprising the steps of:

10 (a) processing the image files to determine a maximally compressed file size for  
11 each image file when compressed to a predefined minimum quality level and to determine a nominal  
12 compressed file size when compressed to a nominal quality level, and to determine a weight for each  
13 image file based upon a high frequency energy content of the image file;

14 (b) identifying image files of the set that will be compressed with the predefined  
15 minimum quality level as a function of:

16 (i) the maximally compressed file size of each image file when  
17 compressed to the predefined minimum quality level; and

18 (ii) the weight of each image file;

19 (c) for all other image files of the set that were not identified to be compressed  
20 with the predefined minimum quality level in step (b), determining a quality level for compressing  
21 the other image files so that each of the other image files will be compressed to a desired size selected  
22 as a function of the weight of the image file and so that the total size of the compressed image files  
23 will not exceed the predefined limit; and

24 (d) compressing the image files identified in step (b) with the predefined minimum  
25 quality level, and all of the other image files not identified in step (b) with the quality level that was  
26 determined in step (c).

27 13. (Original) The method of Claim 12, further comprising the step of limiting the quality  
28 level that is used for compressing the image files to a predetermined range that extends from the  
29 predefined minimum quality level to a substantially higher predefined maximum quality level.

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1 14. (Original) The method of Claim 12, further comprising the step of determining a scaling  
2 factor based upon a currently available space remaining for the compressed files within the  
3 predefined limit and a total of the weight of all of the other image files, wherein the step of  
4 identifying image files that will be compressed with the predefined minimum quality level is repeated  
5 in successive passes through the set of image files, until a pass through the set of image files is  
6 completed without identifying any additional image file to be compressed to the predefined minimum  
7 quality level.

8 15. (Currently Amended) The method of Claim 12, wherein the step of determining the  
9 quality level that will be used for compressing the other image files in step (c) comprises the steps of:

10 (a) determining a desired size for the compressed image file for each of the other  
11 image files in the set that was not identified in step (b) of Claim ~~11~~12, said desired size for the  
12 compressed image file being determined as a function of the weight of the image file;

13 (b) determining an optimal quality level to apply to each of the other image files to  
14 achieve the desired size when the image file is compressed; and

15 (c) determining a difference between the desired size and an actual size of the  
16 image file when it is compressed to the optimal quality level.

17 16. (Currently Amended) The method of Claim 15, wherein the step of determining the  
18 optimal quality level for each image file comprises the steps of:

19 (a) starting with the nominal quality level, determining if the nominal compressed  
20 file size is less than the desired size by no more than a predefined difference, and if so, assigning the  
21 nominal quality level as the optimal quality level; and if not,

22 (b) reducing a range from which to select a new quality level to try as the optimal  
23 quality level when compressing the image file, where the new quality level is determined using a  
24 model relating image quality to compressed file size;

25 (c) determining if the compressed file size resulting from compressing the image  
26 file using the new quality level is less than the desired size by no more than the predefined difference,  
27 and if so, assigning the new quality level as the optimal quality level; and if not,

28 (d) repeating ~~the preceding two steps~~ step (b) and step (c) of this claim with  
29 successive new quality levels, until the optimal quality level is determined.

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1           17. (Original) The method of Claim 12, wherein the predefined limit is selected based upon  
2 one of:

3                   (a)     a storage capacity of a storage medium on which the compressed image files  
4 are to be stored; and

5                   (b)     a maximum permissible size of an attachment to an email, wherein the  
6 attachment comprises the compressed image files.

7           18. (Original) A memory media on which are stored machine instructions for carrying out  
8 the steps of Claim 12.

9           Claims 19 – 28 (Cancelled)

10           29. (Original) A system for automatically selecting a quality level when compressing each of  
11 a set of image files to produce compressed image files, so that a total size of the compressed image  
12 files does not exceed a predefined limit, comprising:

13                   (a)     a memory in which are stored a plurality of machine instructions, said memory  
14 also storing the set of image files;

15                   (b)     a processor that is coupled to the memory, said processor executing the  
16 plurality of machine instructions, causing the processor to:

17                           (i)     determine a maximally compressed file size for each image file when  
18 compressed to a predefined minimum quality level and determine a nominal compressed file size  
19 when compressed to a nominal quality level, and determine a weight for each image file based upon a  
20 high frequency energy content of the image file;

21                           (ii)    identify image files that will be compressed with a predefined  
22 minimum quality level as a function of:

23                                   (1)     the maximally compressed file size of each image file when  
24 compressed to the predefined minimum quality level; and

25                                   (2)     the weight of each image file;

26                           (iii)   for all other image files of the set that were not identified to be  
27 compressed with the predefined minimum quality level in subparagraph (ii), determining a quality  
28 level for compressing the other images files so that each of the other image files will be compressed  
29 to a desired size selected as a function of the weight of the image file and so that the total size of the  
30 compressed image files will not exceed the predefined limit; and

1 (iv) compressing the image files identified in subparagraph (ii) with the  
2 predefined minimum quality level, and compressing all the other image files not identified in  
3 subparagraph (ii) with the quality level that was determined in subparagraph (iii).

4 30. (Original) The system of Claim 29, wherein the machine instructions cause the processor  
5 to limit the quality level that is used for compressing the image files to a predetermined range that  
6 extends from the predefined minimum quality level to a substantially higher predefined maximum  
7 quality level.

8 31. (Original) The system of Claim 29, wherein the machine instructions cause the processor  
9 to determine a scaling factor based upon a currently available space remaining for the compressed  
10 files within the predefined limit and a total of the weight of all of the other image files, and to repeat  
11 the identification of image files that will be compressed with the predefined minimum quality level in  
12 successive passes through the set of image files, until a pass through the set of image files is  
13 completed without identifying any additional image file to be compressed to the predefined minimum  
14 quality level.

15 32. (Currently Amended) The system of Claim 29, wherein the machine instructions cause  
16 the processor to determine the quality level that will be used for compressing the other image files in  
17 subparagraph (iii) by:

18 (a) determining a desired size of the compressed image file for each of the other  
19 image files in the set that was not identified in subparagraph (ii) of Claim ~~27~~29, said desired size  
20 being determined as a function of the weight of the image file;

21 (b) determining an optimal quality level to apply to each image file to achieve the  
22 desired size when the image file is compressed; and

23 (c) determining a difference between the desired size and an actual size of the  
24 image file when it is compressed to the optimal quality level.

25 33. (Currently Amended) The system of Claim 32, wherein the machine instructions cause  
26 the processor to determine the optimal quality level for each image file by:

27 (a) starting with the nominal quality level, determining if the nominal compressed  
28 file size is less than the desired size by no more than a predefined difference, and if so, assigning the  
29 nominal quality level as the optimal quality level; and if not,

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1 (b) reducing a range from which to select a new quality level to try as the optimal  
2 quality level when compressing the image file, where the new quality level is determined using a  
3 model relating image quality to compressed file size;

4 (c) determining if the compressed file size resulting from compressing the image  
5 file using the new quality level is less than the desired size by no more than the predefined difference,  
6 and if so, assigning the new quality level as the optimal quality level; and if not,

7 (d) repeating ~~the preceding two steps~~ step (b) and step (c) of this claim with  
8 successive new quality levels, until the optimal quality level is determined.

9 34. (Original) The system of Claim 29, further comprising a storage medium on which the  
10 compressed image files are stored, wherein the machine instructions cause the processor to select the  
11 predefined size limit based upon one of:

12 (a) a storage capacity of the storage medium; and

13 (b) a maximum permissible size of an attachment to an email, wherein the  
14 attachment comprises the compressed image files.